

REMARKS

Upon entry of this amendment, claims 1-5 and 15-26 are all the claims pending in the application. Claims 22-26 have been added as new claims. No new matter has been added.

I. Claim Rejections under 35 U.S.C. § 112, first paragraph

Claims 2, 3, 17 and 18 were rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. In particular, the Examiner indicated that claims 2, 3, 17 and 18 could be construed to mean that both of the variable resistor and variable inductor are included at the output load part of the signal generator, which is not supported by the specification.

By this amendment, Applicants note that claims 2, 3, 17 and 18 have been modified so as to clarify that these claims are not drawn to a situation in which both of the variable resistor and variable inductor are included at the output load part of the signal generator. In particular, Applicants note that claims 2 and 17 now recite that the signal generator includes the variable resistor at the output load part thereof, and does not include the variable inductor at the output load part thereof. Similarly, claims 3 and 18 have been amended to recite that the signal generator includes the variable inductor at the output load part thereof, and does not include the variable resistor at the output load part thereof.

In view of the foregoing, Applicants respectfully submit that dependent claims 2, 3, 17 and 18 are in compliance with 35 U.S.C. 112, first paragraph. Accordingly, Applicants kindly request that the above-noted rejection be reconsidered and withdrawn.

II. Claim Rejections under 35 U.S.C. § 102

Claims 1, 5, 16 and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ishii et al. (U.S. 5,280,641).

Claim 1 recites the feature of a control circuit that controls a capacitance value of a variable capacitor so as to make a cutoff frequency or a resonance frequency of a signal generator constant. Applicants respectfully submit that Ishii does not disclose or suggest such a feature.

Regarding Ishii, Applicants note that this reference discloses an AM radio receiver that is capable of performing automatic tuning. In this regard, as explained in Ishii, when an automatic tuning button is operated, a PLL circuit 42 is put in the automatic tuning mode, thereby starting selection of a broadcasting station (see col. 4, lines 61-64).

In Ishii, during automatic tuning, an oscillation frequency of a local oscillator 22 is varied in response to the output signal from the PLL circuit 42 (see col. 4, lines 64-66). When a broadcasting station is detected by a station detector 50, the station detector 50 sends the PLL circuit 42 a signal for stopping the frequency variation of the local oscillator signal (see col. 5, lines 31-35). Thereafter, the local oscillation frequency is fixed at the frequency at the moment (see col. 5, lines 34-35).

The PLL circuit 42 then outputs to an RF tuning circuit 20 a tuning signal corresponding to the fixed local oscillator signal, whereby a capacitance of a variable capacitance diode 62 is varied according to the tuning signal so as to set the tuning frequency in the RF tuning circuit 20 (see Fig. 4A and col. 5, lines 35-40). Specifically, in Ishii, it is disclosed that the capacitance of the variable capacitance diode 62 is controlled such that “the

tuning frequency in the RF tuning circuit 20 is made 450 KHz smaller than the frequency of the local oscillator 22” (see col. 5, lines 41-43).

Thus, in Iishi, while the capacitance of the variable capacitance diode 62 is controlled such that the tuning frequency in the RF tuning circuit 20 is made 450 KHz smaller than the frequency of the local oscillator 22, Applicants note that the capacitance of the variable capacitor diode 62 is not in any way whatsoever controlled so as to make a cutoff frequency or a resonance frequency of a signal generator constant.

In view of the foregoing, Applicants submit that Iishi does not disclose, suggest or otherwise render obvious the above-noted feature of a control circuit that controls a capacitance value of a variable capacitor so as to make a cutoff frequency or a resonance frequency of a signal generator constant, as recited in claim 1. Accordingly, Applicants submit that claim 1 is patentable over Iishi, an indication of which is kindly requested.

In addition, Applicants note that claim 1 also recites the feature of a signal generator having an output load part comprising a variable resistor or a variable inductor. In the Office Action, the Examiner has taken the position that the transistor 16 of Iishi corresponds to the “variable resistor” of claim 1. Applicants respectfully disagree.

In particular, Applicants point out to the Examiner that the transistor 16 of Iishi is an element which constitutes a base-grounded type amplifier circuit, and cannot in any way whatsoever be considered as a variable resistor. If the Examiner disagrees, Applicants request that the Examiner provide a detailed explanation as to how the transistor 16 can be considered as a variable resistor.

In view of the foregoing, Applicants respectfully submit that claim 1 is patentable over Iishi, an indication of which is kindly requested. Claim 5 depends from claim 1 and is therefore considered patentable at least by virtue of its dependency.

Regarding claim 16, Applicants note that this claim recites the features of a signal generator having an output load part comprising a variable resistor or a variable inductor; and control means for controlling a capacitance value of a variable capacitor so as to make a cutoff frequency or a resonance frequency of a signal generator constant. For at least similar reasons as discussed above with respect to claim 1, Applicants respectfully submit that Iishi does not disclose, suggest or otherwise render obvious such a feature.

Accordingly, Applicants submit that claim 16 is patentable over Iishi, an indication of which is kindly requested. Claim 20 depends from claim 16 and is therefore considered patentable at least by virtue of its dependency.

II. Claim Rejections under 35 U.S.C. § 103(a)

Claims 4, 15, 19 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. (U.S. 5,280,641).

Claims 4 and 15 depend from claim 1, and claims 19 and 21 depend from claim 16. As noted above, Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious all of the features recited in claims 1 and 16. Accordingly, Applicants submit that claims 4, 5, 19 and 21 are patentable at least by virtue of their dependency.

III. New Claims

Claims 22-26 have been added as new claims.

Regarding claims 22-25, Applicants note that these claims depend from claim 1 and are therefore considered patentable at least by virtue of their dependency.

Regarding claim 26, Applicants note that this claim recites the feature of a control circuit that controls the capacitance value of the variable capacitor so as to make a cutoff frequency or a resonance frequency of the signal generator constant. For at least similar reasons as discussed above with respect to claim 1, Applicants respectfully submit that Iishi does not disclose, suggest or otherwise render obvious such a feature. Accordingly, Applicants submit that claim 26 is patentable over Iishi, an indication of which is kindly requested.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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